



# SELF-DIRECTED LIFE-LONG LEARNING IS PROBLEM BASED LEARNING

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## ABSTRACT

Problem Based Learning (PBL) is an innovative way of getting knowledge and thinking properly to solve problems. In the 1960s, PBL method was used in McMaster University School of Medicine in Canada and then spread around the world. If students follow PBL method, they develop knowledge, effective problem solving skills, self-directed learning, effective collaboration skills and intrinsic motivation.<sup>1</sup> Problem Based Learning shows active involvement of students. By working together students come to know their own knowledge, how much they should know about that particular topic, the sources from which they will get knowledge etc. Instructors (Tutors) should guide and monitor the learning process.<sup>2</sup> Tutor should encourage the students and built up their confidence.<sup>3</sup> PBL is not a lecture.

PBL is not conducted in a class room

**Key Words:** Problem Based Learning (PBL), Hypotheses, Learning issues

## INTRODUCTION

PBL is discussion and not lecture. All students are involved in the process, so it is student centered learning. As this is a student centered activity, they are more interested in PBL than in lectures. In lectures, teacher is most actively involved and involvement of students is minimum. In PBL, small group of students discuss the topic so they do not hesitate to speak. They develop communication skill. Facilitator's duty is to make students to think and obtain knowledge which is required to solve the problem. Facilitator will not give any information but he/she will make the students to solve the problem. After getting a trigger by teacher, a list of learning issues is made. As the first session is finished, students are very eager to know answers. In this way students are made interested in getting knowledge which helps them life-long.

In many institutions teaching is done by taking lectures, demonstrations and practices. In all these methods involvement of teacher is more than student. But this is not true with PBL. Once the problem is given, students start thinking about it. To get knowledge students use books, internet facilities or consult other people who know about that topic. It is conducted in 2 or 3 sessions. In the 1<sup>st</sup> session after getting problem, students discuss about that topic with whatever knowledge

they are having. In 2<sup>nd</sup> session they come prepared and then discuss again. All these efforts teach them how to solve the problem (not only medical but any problem in life)

## METHODOLOGY

Students were actively involved in PBL sessions. In first session students got topic. They found out key points. They discussed about those key points. Those key points about which they didn't know, they were discussed in 2<sup>nd</sup> session. Before coming to 2<sup>nd</sup> session they read books, tried to get sufficient knowledge from internet or other experts also. So students were actively working to prepare topic. As they took part in discussion, their confidence increased. As they came to know about this fact, their interest in learning, solving problems also increased.

## DISCUSSION

Barrows defines the Problem-Based Learning Model as:<sup>4</sup>

1. Student Centered Learning
2. Small Student Groups, ideally 6-10 people

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3. Facilitators or Tutors guide the students rather than teach
4. A Problem stimulates learning
5. The problem is a vehicle for the development of problem solving skills. It stimulates the cognitive process.
6. New knowledge is obtained through Self-Directed Learning (SDL).

Many medical colleges follow the traditional teaching method. In traditional teaching method many errors are there with over-load of knowledge. Because of overload of knowledge students may not remember important information which is required in medical practice.<sup>5</sup>

Students enjoy PBL than lectures. Workshops were organized on PBL in Hong Kong to improve University Teaching.<sup>6</sup> The major observations and assessment by the teaching consultant revealed that when given appropriate guidance and encouragement, the 1<sup>st</sup> year medical students at the University of Hong Kong can perform very well in PBL sessions.

PBL helps the student in building knowledge. PBL includes problems that can be solved in many different ways and have more than one solution.<sup>7</sup> In PBL student learns without stress, helps to develop communication skill. PBL promotes lifelong learning.<sup>8</sup> Schmidt, and Hung explain the cognitive constructivist process of PBL.<sup>2,3</sup>

In PBL sessions' One student becomes a group leader.

- All students note down key words.
- Within their group they discuss about possible theories and hypotheses.
- All of them write down learning issues.
- After the initial team work, students work independently. They try to find out answer by using different aids.
- Again they come together and discuss the learning issues. As they are coming this time with proper preparation, they know the solution to the problem.

Role of facilitator /instructor (tutor) is very important. Facilitator should not give knowledge but if discussion is going away from the topic then he/she should tactfully handle the situation and bring them to the correct path. The role of the instructor(known as the tutor in PBL) is to facilitate learning by supporting, guiding, and monitoring the learning process.<sup>2</sup> In PBL the role of the instructor is to guide the learning process rather than providing knowledge.<sup>1,9</sup> Students feedback is also important component of PBL. Because of interaction between students, they think and interpret result or final diagnosis in case of medical students. PBL assists in processes of creating meaning and building personal interpretations of the world based on experiences and interactions.<sup>10</sup> PBL helps the student from theory to practice during their life journey through solving the problem.<sup>11</sup> A student using PBL after fin-

ishing his/her medical course becomes more competent doctor. This effect was especially strong for social and cognitive competencies such as coping with uncertainty and communication skills.<sup>12</sup>

### **Advantages-**

- 1) Student learn the application of knowledge.
- 2) Students understand that learning is not a time limited process. One should go on learning till death.
- 3) As this is practical oriented session, students remember knowledge for longer duration.
- 4) They learn to speak in small group. By practice they can speak in large group also. Along with this they develop communication skill as well as inquiry skill.
- 5) Discussion of the topic is carried out through many angles.
- 6) Stress free, noncompetitive, healthy environment of PBL is a best way of learning.
- 7) After every PBL not only student but tutor also learns something which gives satisfaction. Learning becomes enthusiastic.

### **Disadvantages-**

- 1) Some teachers say that depth of knowledge is not achieved by PBL as pointed out by Woods<sup>13</sup>. Doctors who are successfully practicing, do they remember detailed anatomy of nervous system? It is impossible. But if they have seen a case of facial palsy and discussed the case with someone, they will remember it life long. So practical knowledge and discussion is more important.
- 2) To carry PBL sessions more teaching staff, more PBL rooms are required which may be a economic burden to that institute.

## **CONCLUSION**

As learning is an important method to become successful in life, we need to examine our teaching methods regularly to see if they continue to meet the needs of our students. There should be experimental evidence and sound reason to change curriculum so that students will be benefitted. After some years new method will come which may be better than PBL. That time we should accept that method also.

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